



Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

THOUGHT BEFORE LANGUAGE: A DEAF-MUTE'S RECOLLECTIONS.

ON page 266 of the first volume of my work, *The Principles of Psychology*, I quoted an account of a certain deaf-mute's thoughts before he had the use of any signs for verbal language. The deaf-mute in question is Mr. Melville Ballard, of the Institution for the Deaf and Dumb at Washington; and his narrative shows him to have had a very extensive command of abstract, even of metaphysical conceptions, when as yet his only language was pantomime confined to practical home affairs. Professor von Gizycki of Berlin, whose nominalistic prepossessions were apparently startled by Mr. Ballard's account, wrote to me to ask if I had made sure of his being trustworthy. This led me to make inquiry amongst those who knew Mr. Ballard intimately, and the result was to show that they all regarded him as an exceptionally good witness.¹ Mr. Fay

¹ Professor Samuel Porter (who first published Mr. Ballard's statement in the *Princeton Review* for January, 1881) says: "I regard him as a person quite remarkable for the clearness and accuracy of his recollection of matters of fact, especially such as have occurred under his own observation or in his own experience, and as scrupulously honest and truthful. Indeed his traits of character, both intellectual and moral, are such that I cannot conceive of a case in which testimony of the kind in question could be less open to suspicion and objection." — Mr. Edward Allen Fay writes: "Mr. Ballard is an exceptionally conscientious person in making statements. There is nobody whose testimony with respect to any facts of which he might have knowledge I should more readily accept than his. I place implicit confidence in his honesty as a witness. Is it possible that he is himself deceived, and that, as Prof. v. G. suggests, he 'verlegt sein jetziges gebildetes Denken in die Seele jenes Kindes zurück?' I suppose it is possible, but it does not seem to me probable. His recollection of those early years is so distinct, he recalls so vividly other circumstances which are directly associated with the train of thought described, and about which there could be no mistake, that I am compelled to accept his statement as 'unconditionally trustworthy.'" — Mr. J. C. Gordon says: "Mr. B. is peculiarly qualified to relate incidents interesting to him in the order in which they originally occurred, and with extreme accuracy. His perceptions are acute, and his power of recollection of facts within the range of his experience I consider quite extraordinary. He is not a great student of books, and probably has no idea of the bearing of his statements on metaphysical speculations."

(the gist of whose statement about Mr. Ballard I print below) was kind enough to refer me to another printed account of a deaf-mute's cosmological ideas before the acquisition of language; and this led me to correspond with its author, Mr. Theophilus H. d'Estrella, instructor in drawing (I understand) at the California Institution for the Deaf and Dumb, and the Blind. The final result is that I have Mr. d'Estrella's permission to lay before the readers of the PHILOSOPHICAL REVIEW a new document which, whilst it fully tends to corroborate Mr. Ballard's narrative, is much more interesting by its intrinsic content.¹

The printed account just referred to appeared in the *Weekly News* (a paper published at the Institution at Berkeley, California, and printed by the pupils) for April 27, 1889. Although expressed in the third person, Mr. d'Estrella informs me that it was prepared by himself. I give it here as it stands, in the form of a note to a paper by Mr. J. Scott Hutton on the notions of deaf-mutes before instruction:

This interesting extract reminds Mr. d'Estrella of his similar notions. Nothing stimulated his curiosity like the moon. He was afraid of the moon, but he always loved to watch her. He noticed the shadowy face in the full

¹ Mr. W. Wilkinson, Superintendent of the Institution, writes to me of Mr. d'Estrella that "he is a man of the highest character and intellectual honesty. He was the first pupil that ever entered this Institution, and when I took charge of the school in 1865 he was about fourteen years old. It was *at that time* that I became specially interested in his account of his explanations of the various physical phenomena as they presented themselves to his untutored mind. At that time I wrote out many pages of his story, but this account, with a good deal of other material, was destroyed in our great fire of 1875. It very often occurs that deaf-mutes are not able to distinguish between the concepts obtained before and after education. By the time they have obtained education enough to express themselves clearly, the memory of things happening before education has become dim and untrustworthy; but Mr. d'Estrella was, and is, unusually bright and of a very inquiring turn of mind, so that before coming to school he endeavored to explain to his own satisfaction the reason of many things, and it is quite surprising how similar his explanations were to the explanations which are found in the childhood of many races. Mr. d'Estrella is imaginative, but quite as much so before education as since, and the early age at which he gave me the account of himself forbids the notion that he could have been influenced by mythologies, and the nearness of time, taken with his honesty, is sufficient assurance of the accuracy of his statement. You may trust Mr. d'Estrella perfectly for any statement he may make."

moon. Then he supposed that she was a living being. So he tried to prove whether the moon was alive or not. It was accordingly done in four different ways. First, he shook his head in a zig-zag direction, with his eyes fixed on the moon. She appeared to follow the motions of his head, now rising and then lowering, turning forward and backward. He also thought that the lights were alive too, because he repeated similar experiments. Secondly, while walking out, he watched if the moon would follow him. The orb seemed to follow him everywhere. Thirdly, he wondered why the moon appeared regularly. So he thought that she must have come out to see him alone. Then he talked to her in gestures, and fancied that he saw her smile or frown. Fourthly, he found out that he had been whipped oftener when the moon was visible. It was as though she were watching him and telling his guardian (he being an orphan boy) all about his bad capers. He often asked himself who she could be. At last he became sure that she was his mother, because, while his mother lived, he had never seen the moon. Afterwards, every now and then, he saw the moon and behaved well towards his friends. The little boy had some other notions. He believed that the earth was flat and the sun was a ball of fire. At first he thought that there were many suns, one for each day. He could not make out how they could rise and set. One night he happened to see some boys throwing and catching burning oil-soaked balls of yarn. He turned his mind to the sun, and thought that it must have been thrown up and caught just the same — but by what force? So he supposed that there was a great and strong man, somehow hiding himself behind the hills (San Francisco being a hilly city). The sun was his ball of fire as a toy, and he amused himself in throwing it very high in the sky every morning and catching it every evening.

After he began to convince himself about the possible existence of such a mighty god, he went on with his speculations. He supposed that the god lit the stars for his own use as we do the gas-lights in the street. When there was wind, he supposed that it was the indication of his passions. A cold gale bespoke his anger, and a cool breeze his happy temper. Why? Because he had sometimes felt the breath bursting out from the mouth of angry people in the act of quarrelling or scolding. When there were clouds, he supposed that they came from the big pipe of the god. Why? Because he had often seen, with childish wonder, how the smoke curled from lighted pipes or cigars. He was often awed by the fantastic shapes of the floating clouds. What strong lungs the god had! When there was a fog, the boy supposed that it was his breath in the cold morning. Why? Because he had often seen his own breath in such weather. When there was rain, he did not doubt that the god took in much water, and spewed it from his big mouth in the form of a shower. Why? Because he had several times watched how cleverly the heathen Chinese spewed the water from his mouth over the washed clothes. The boy did not suppose that the people grew. He seldom saw a baby, but when he did, he hated it, and thought it a horrid-looking thing. He had contempt for girls. He was never bad on Sundays. In fair weather he would always go to church and Sunday-school. Why? Because he fancied that the moon wanted him to go, as he had been in the habit of going to the Catholic church with his mother. He was in rags

sometimes, but the church-people and Sunday-school children were generally kind to the homeless little boy. He had some faint idea of death. He saw a dead baby in a little coffin. He was told that it could not eat, drink, or speak, and so it would go into the ground and never, never come back home. Again, he was told that he would get sick and go down into the ground. He got angry. He said that he would go up to the sky where his moon-mother wanted him.

Mr. d'Estrella's autobiographic letter to me runs as follows :

The history of my parents is a very little known. I never saw my father. He was a French-Swiss. My mother—a native of Mexico—died when I was five years old. Then I had no other living relative known to me. It is about seven years ago when I first learned that I had one aunt and two cousins yet living. I am now forty years old.

I was born quite deaf. However, I have been able to hear a little in the left ear only. About eight years ago my ears were examined, and it was said that the external ear and the drum as well as the nerves going to the brain were perfect, but the trouble was the inner ear or the mechanism of the internal ear. Suppose, if I were not born deaf, it must then be that I became deaf somehow in my infancy. My two friends who saw me in my infancy said that I was not born deaf. They remembered that everybody would speak to me, and I should immediately turn towards them. The doctors attributed my deafness to a fall or fright. I cannot see that either the fall or the fright had anything to do with my deafness. It is said that those who are born deaf never hear in their dreams. I am strongly subjected to dreams, but I never heard any sound in my dreams until once in 1880. Since then I had not heard again till 1890. Later, since, I have heard three times—making up five times in all my life hitherto. However I do not believe that fact, because I know that a good many deaf mutes who lost their hearing at five or six years have never heard in their dreams.

The first recollection is that I cried. I think I was four years old then. One morning my mother left me alone for the first time in a room and locked the door. I was afraid because I had never remained alone in a closed room. So I cried. She came back in soon and ran laughing to me. She comforted and caressed me with kisses of love. This only is all what I can think instinctively of a mother's love. Probably the next recollection is one of the few I have cherished through years of memory. I remember it as though this had occurred yesterday. While walking one sunny Sunday morning with my mother to a Catholic convent, it took me by surprise when I heard the bell tolling. Rapture seized me at once. I cried joyfully. Then I felt a dreamy, wandering sensation amid the bustle of the people. Even after the good bell ceased tolling, the vibrations continued ringing in my over-excited brain for a while. Often do I think of this undying recollection—sometimes with awe, sometimes with delight. When I think of it, I feel as though I were *actually* hearing the bell toll—toll slowly and sweetly. Even, while writing this part, I feel apparently paralyzed in my senses as if my soul were giving way to the mesmeric spell of the very recollection.

I have several other early recollections, more or less perfect. I remember that I saw a priest burning a number of Bibles; that I attended a Catholic spelling-school (I often wonder if I learned to say 'papa' there. I can say 'papa' as plainly as any one can — this is the only word I have ever lisped); that I saw much excitement in moving the furnitures and other household articles in a hurried and confused manner, because there was an earthquake (which I afterwards learned in the *Annals of S. F.* — I was born in S. F.); that I saw a great red comet; that my mother told me that we all should be knocked down if the comet struck the ground; that I watched the comet every night until it disappeared; that I saw a man lassoing another, both on horseback at full speed through the street; that I saw two fires near my home; that my mother took me to church on Sundays and on other days oftener early in the morning. If I was restless during the service, she would give me something to eat. (Although I am not a Catholic, yet now and then I go to the Catholic church, and enjoy my meditation mainly to keep the memory of my mother.) While my mother was alive, I did not know that I was deaf. I did not see the sun and stars figuratively. I remember that I had never observed the moon but once with a sort of wonder, — the moon was new. I seldom went out by myself and played with the children. I was then passively quiet and good, almost an intellectual blank.

I know almost nothing about my mother's death. While she was sick, she gave me some marmalade and kissed me, for the last time. I was then put away. I do not remember if I saw her corpse or attended her funeral, nor how I felt about her death. Only that my friends said that she had gone to the sky to rest.

What then became of me after my mother's death? I remember at best that I was taken to the house of my god-mother. Since she was my mother's best friend, I did not miss my mother consciously at all. A short time afterwards, a French consul (I believe, my father's brother) took me to the house of a Mexican woman and left me there, with a box of Noah's animals, in her charge. I did not feel homesick. She continued as my guardian until I was taken to school (I was the first pupil, then, in the California institution). I remained about four years with her. She, I learned when in school, was my mother's bitter enemy out of jealousy in love affairs.

Hitherto till this time I had but a little, if ever possible, of instinctive language. I could hardly make intelligible signs; but my mother might understand my gestures, that is, such as were moved by feelings for what I should either wish or deny. For example, the idea of food was aroused in my mind by the feeling of hunger. This simply constitutes the Logic of Feeling; bear in mind that it is different from the Logic of Signs. I could neither think nor reason at all, yet I could recognize the persons either with delight or with dislike. Still, nearly all the human emotions were absent, and even the faculty of conscience was wanting. Everything seemed to appear blank around me except the momentary pleasures of perception. What happened at home had not come back within my memory until I went to school. The state of my mental isolation, I believe, is wholly due to my confinement at home. I was then five years old, though.

But no sooner had I been left in charge of my guardian than the knowl-

edge of good and evil was opened to me slowly but surely. As Minerva the goddess of wisdom was said to have leaped forth out of the brain of her father Jupiter, full grown and full armed for the business of life, so was my new life formed apparently mature and complete. The unwomanly treatment of my guardian was, in truth, the direct cause of the evolution of my instinctive — or better speaking — latent feelings for the higher. Not only could I think in pictures, but almost spontaneously I was also able to learn how to think and reason. Thinking in pictures or images is prevalent among most of the congenitally deaf children at different degrees in proportion to the different powers of perception. That faculty predominates in this class, and consequently compensates for the loss of hearing, no matter even if they do not think at all. I learned to know that there was a difference between right and wrong, and to understand that there was a relation between cause and effect. This proves that my conscience must have been in the act of developing. My mental condition was favorably elaborated and properly reduced to the Logic of Signs.

How were the essential signs acquired? My mother must have known my wants beforehand, without any forced attempt on my part. But my guardian was a stranger to me, and could not understand my desires. It was necessary that she or I would seek something rational or conventional to make us understand each other. So we made signs, one after another. Imitation constitutes the foundation of the sign language. We traced as intelligibly as possible the shapes and peculiarities of the objects and the actions of the bodily movements. The language thus acquired was greatly augmented by the expression and play of the features to emphasize the meanings of the signs. She soon made herself a good sign-maker. The Mexicans, as well as the people of the Romance races, are expert in pantomimic gestures which they are in the habit of using while speaking to one another. How natural all the imitative signs are! When I came to school, I had no difficulty in understanding the true deaf and dumb language of signs — the conventional language. The sign language is the universal one. (I do not pretend to say that I am about the best sign-maker in this institution. This must be attributed to the early training of the mind during my ante-speech days.)

My guardian let me go about in the rear yard. There I learned to love hens, ducks, turkeys, parrots, canary-birds, dogs, cats. Quite a bustle of life. A novelty of observation.

The woman often went out shopping. I sometimes accompanied her. As I had learned to remember the places she frequented — within a radius of two or three blocks — she sent me to the grocery to get something, such as bread, milk, potatoes, etc. I enjoyed it, because she would not let me go otherwise. While out on errand, I now and then might make acquaintances with boys and play with them for a little time. One morning I was carrying a pitcher of milk. A boy accidentally broke it and let the milk spill. I cried and went home with the broken vessel. I told the woman honestly about it. She would not listen, but she got angry and whipped me. I believe that this was the first whipping I had ever got from any person. Because I thought that it was not good, my blood rose in protest. She whipped me harder, and I yielded reluctantly.

I now began to notice the gambols of the boys out on streets. So new and keen was my instinct for sport that I envied their play. Then I slipped stealthily out of the yard to the gate and looked at their pranks with delight. At last I went out to play. The woman caught and whipped me. I played again. She whipped me again. Well, I then began to think why. I thought and thought. She could not make me understand that I was a bad boy. Playing seemed to be *good*. I soon learned to hate her. If she had scolded me gently and gave me decently to understand her command, it might have been all right. But it was too late. I made up my mind that I would have my own way, regardless of consequences. I did not want to be whipped so often. I all at once hated whipping. It would make me anything but good. I played out whenever I liked. She whipped me nearly every time. It did me no good. It hardened my body as well as my heart. She desired some other way of punishment by taking off my hat. It failed. She then took off my shoes. It met the same fate. She took off my jacket. I still played only with pants and a shirt on. It availed nothing. I had already determined that she would be revenged. She found it useless to break down my obstinacy. Now and then she would whip me very long and hard when I was out too long. I saw it rationally, but I delighted in following the boys on the alert far from home—say, ten blocks. One day I was playing with two larger boys. There was a large miry pond across the alley. We wanted to cross it. They succeeded, but I was unfortunate. While I was walking along the picket fence, one of the pickets gave way and I lost my balance, falling flat into the mire. I, from head to foot, was covered with the mud. I waddled and cried until I got out of the pond. By chance, my guardian, who had made a call, saw and took me. It was quite a far way off. The children out at recess stared at me and laughed ‘wickedly’ like the imps. What a funny picture it must be! As soon as we got home, she made me strip off my clothes and wash them. I was then completely naked—still worse, I was made to do the washing out in the yard. It meant punishment. Several of the boys peeped over the yard and made faces at me. I rebelled, but the woman was the more determined, and the boys were the most delighted. I had to remain so in this uncomfortable place for hours until the clothes got dry enough.

A good many of the neighbors knew from the hearsay of the children and by hearing my cries that I must have been cruelly treated. They were kind to me, and would let me come in and have something nice to eat. Several of them dared to see the bad woman, and tell her not to be so hard on me. But she had her own way.

Her new husband was an American captain and owned some barges. The woman sometimes took me with her to his office at the wharf where she usually got meat. Afterwards she sent me alone to the wharf and bring the meat. What a long journey it would take for a small boy to cross a dozen of blocks—alone! However, what a splendid tramp it was! How much I loved to go to the bay! The sea was a wonder to me—nay, a wonder of wonders, since even a boat was a marvel. What a variety of life along the wharves! Such a life with such a variety awakened in me a vague feeling of mystery—sadness(?)—loneliness(?). At my request, the woman would

let me go to the wharf early in the morning to get the meat. As soon as I brought it home, I made haste to the bay, and spent many long hours to view the cosmopolitan sights. I made acquaintance with the rough-looking though good-natured sailors. They taught me many good and bad ways. I was quick to see and understand. I learned from them how to draw a picture of a ship. I made very good pictures, indeed, for a boy of my age. I sometimes doubt if I can draw a ship with her details so good now as I did that time, because I used to notice all the parts of the whole ship. (I am now an amateur artist and photographer. I teach drawing at school.)

I loved money. I liked best to have dimes and half-dimes. The love of money led me to steal some little money. I was an adept in theft. I could steal some small thing easily, most without being detected. Yet my friends or some other person knew from hearing my steps that I had taken something, usually eatables. But I never confessed it, even by threats, nay, by ready force. That habit was mainly owing to the condition of hunger; this was an excusable necessity, I say. I was often ill-fed at home. It meant punishment for staying away too long. This stung me dearly towards stubbornness, and I became worse and worse. It shows plainly that there is no greater fallacy than 'the child's will must be broken!' Will forms the production of character. Without strength of will there will be no strength of purpose.

I began to find a new kind of pleasure in being out at night, because I could see more vicissitudes of evil amid the din of dissipation peculiar to the early days of California, then before the sixties. I was as a moth midst the dazzling lights of the night revels. I became quite a nocturnal being. In this way I contracted many bad things during my abandoned youth,—a period of four years. The influence of this evil has still retained some fascinating but unhealthy influence over my imagination. On this account I sometimes ask myself, with a certain sense of mystery and gratitude, if I had left school twenty years ago, and gone somewhere for a living, what might have become of me? I have been connected with this school thirty-one years. My long, home-like stay prevents me from ever returning to that pernicious life too soon.

More about stealing. Often did I go out at night with an empty stomach. I had to find something to satiate my hunger. Sometimes I returned home at midnight without a morsel, and entered the kitchen quietly. I took bread or meat, or what else I could hold, and slipped away. Sometimes it was done at the different houses of my friends. They would be too glad to give me some food, but I was too proud or ashamed to beg. Sometimes I took a loaf of fresh bread off the door-steps where the baker put it. Sometimes, while passing close to the fruit-stand, I slipped one apple or two into my pockets or shirt. I had no intuitive conscience at all. There might possibly be a mote of it when I thought of the moon (you have already known my cosmology). Of course, hunger was stronger than conscience. Yet that faculty seemed to be more or less active. I shall say how 'I was cured of stealing. I frequented a meat-shop. The good-natured butcher let me go about at large. I happened to see some money in a box under the counter behind. I thought of getting some little money there. So I went back and crept slowly to the box and took a dime. I feasted on its worth of candy.

Fond of sweets I was. I stole another dime in a few days. I wanted more money, so I stole a quarter of a dollar. My conscience worked up as though saying that it was too much. I knew that it cost two dimes and one half-dime together. As long as I had it with me I felt peculiarly unhappy. I turned around to see if it was all right. I spent all of it, and saw how much more good time I could have with one of greater value. I did not come back to the shop so soon for the money. A good while later I stole the other quarter, and so on about weekly I took the quarters, piece after piece. That never-forgotten morning I wanted a quarter. While behind under the counter, I was about to put my hand into the box. The man opened it. I was quite frightened, but remained still. I would not leave, but I waited and slipped my hand into the box. So nervous was I that I took whatever piece I could touch first. I took one, and thought from the size of the piece that it was a quarter. I made haste to the nearest grocery-store and asked for candy. I put the money on the counter. It was gold!—ten dollars!! I felt as though I were a fish out of the water, with my eyes shooting out. At once I took it back and ran out. I could see nothing but gold everywhere. My heart beat. Did I know that I was guilty? If so, how could I know? Simply by seeing that I had stolen *too much*. Although I did not know the relative value of gold, yet I knew that gold cost more than silver. Because it was heavy, bright, and could be had only by the rich. I felt that it was too much for me. I never saw gold among the poorer people, and always noticed it in the hands of the more respectable ones. How could I get rid of the gold? I ran and ran with the gold tight in my hand until I returned to the senses. Then I went to the confectionery and bought much candy, regardless of the consequences about the change. The man looked surprised, but yet, knowing that I was deaf, he might not suspect anything ill with me. He gave me the change all in silver, many halves. I was quite bewildered, but I tried well to be still. The silver was now too heavy for me to carry along as easily. The conscience came, saw, and conquered. I went some way with caution, and hid all the money under a saloon. I felt free. I thought of going to the minstrels in the evening. When the time came I went back for the money. I found it all gone. I was momentarily disappointed, but in fact I felt happier than sorry for conscience's sake. Strange to say, anybody, even the butcher, never gave me to understand that I had been suspected of the theft. Still more strange, I have never stolen money again. Besides, I did not steal as many other things, particularly food, as I used to. My conscience must have become keen enough. It began developing more and more, mainly owing to the influence of the moon. (Then the moon was full, when I found the money gone.) Therefore my cosmological speculations came out, as those already given in the *Annals*.

Let me add as to the origin of the ocean. One day I went with some boys to the ocean. They went bathing. I first went into the ocean, not knowing how it tasted and how strong the waves rolled. So I was knocked around, with my eyes and mouth open. I came near being drowned. I could not swim. I went to the bottom and instinctively crawled up on the sand. I spit the salt water out of my mouth, and wondered why the water was so salty. I thought that it was the urine of that mighty god.

I hated girls with contempt. I never played with them. I would not visit my friends who had girls at home. Why? Because from my accidental observation I found out the difference between the girls and boys,—not in dress, but in sex. This led me to despise female animals. When I was hungry, I might occasionally go to the women for foods, but I could not stay long with them. While at school, I retained this dislike three years before I could like a girl.

I cannot remember if I ever knew that I was deaf. I knew that I could not talk, but I never asked myself why, not because I was satisfied with my condition, but because I was too wide awake to think of my own self. I often wondered how others could speak, particularly while they were quarrelling. I believed that the people could never grow. I had never wanted to be a man, because I could do enough what I liked to. I seldom saw a baby. I hated it and thought it a dirty thing. I have still retained the dislike for babies. (I am single.)

This is all what I can say for the present. Mr. Wilkinson, when he was my teacher, used to make me write about what I did before I came to school. It helped me much thus to repeat the memory. Ever since my recollections have been the same, though the words have changed now and then to get better style and more definite meanings in language.

It shows that I thought in pictures and signs before I came to school. The pictures were not exact in details, but were general. They were momentary and fleeting in my mind's eye. The signs were not extensive but somewhat conventional after the Mexican fashion—not at all like the symbols of the deaf and dumb language. I used to tell my friends about some of my cosmology. Several of them encouraged me.

One always took so much interest in me that he attempted to teach me. But he knew almost nothing, only he could say yes or no with more or less emphasis in gestures, when I said in pantomimic what I did or what I saw, or what I thought. He was the means of sending me to school as soon as he learned that the school started. He was an Italian. Some of the signs I used were beard for *man*, breast for *woman*, moustache with spelling *papa* for *papa*, the hand moving over the face and one finger of each hand meeting parallel (alike, meaning that some one looked like me) for *mother*, the hand down over the shoulder moving like a bell for *Sunday*, two hands open before the eyes for *book* or *paper*, one hand stretching sideway for *going*, the hand moving backwards for *coming*, the hand moving slant for *whipping*, the fingers whirling for *stealing*, the rubbing of the thumb and one of the fingers for *money*, two hands turned opposite for *breaking*, one finger stretching from the eye for *seeing*, one finger stretching from the mouth for *speaking*, one finger stretching from the forehead for *understanding*, one finger rapping lightly on the forehead for *knowing*, ditto with negation for *not knowing*, one finger resting on the forehead with the eyes shut for *thinking*, one finger now resting on the forehead and then stretching with emphasis for *understanding*, etc., etc. The signs for meat, bread, milk, water, chocolate, horse, cow, were as natural as the Mexicans make nowadays. The Mexicans generally ask with facial gestures, 'What do you do?' 'How do you do?' 'What is the matter?' 'What is the news?' It is natural. I could then understand these questions.

The reader will have noticed that many of the signs which Mr. d'Estrella reports himself to have used are regular conventional gestures of the deaf-mute sign language. Some of these may be used habitually by the Mexicans, others the poor boy probably captured out of the social atmosphere, so to speak, in the way in which needy creatures so generally find a way to the object which can satisfy their want. It will be observed, however, that his cosmological and ethical reflections were the outbirth of his solitary thought ; and although he tried to communicate the cosmology to others, it is evident, since the most receptive of his friends could only say 'yes' or 'no' to him in return, that the communion must have been very incomplete. He surely had no conventional gestures for the causal and logical relations involved in his inductions about the moon, for example. So far as it goes, then, his narrative tends to discountenance the notion that no abstract thought is possible without words. Abstract thought of a decidedly subtle kind, both scientific and moral, went on here in advance of the means of expressing it to others. To a great extent it does so in all of us to-day, for nothing is commoner than to have a thought, and then to seek for the proper words in which to clothe its most important features. The only way to defend the doctrine of the absolute dependence of thought on language is so to enlarge the sphere of this latter word as to make it cover every possible sort of mental imagery, whether communicable to others or not. Of course no man can think without some kind of mind-stuff to think in. Our general meanings and abstract conceptions must always have for their vehicle images more or less concrete, and 'fringes' of tendency and relation which we feel between them. To a solitary untaught individual (could such a one exist) such un verbalized images would be rationally significant, and a train of them might be called a monologue. But such a monologue is not what any one naturally means by speech ; and it is far better to drop the language-doctrine altogether than to evaporate its meaning into triviality like this.

Mr. d'Estrella's reminiscences also help to settle the question of whether moral propositions are 'intuitive' or not. He

begins life as a thief, with, as he says, "no intuitive conscience at all," and yet with a knowledge that what he does is an outward social offence, since he must needs do it secretly. At last he is converted to honesty — by what? Not by the teachings of others, not by detection and punishment, but by the very magnitude of his own crimes. He steals so much that the burden becomes too heavy to bear. It sobers him; and a success which would have turned a non-moral or an immoral boy into a confirmed criminal, produces in him a reaction towards honesty. This would seem to be a common experience. A youth tries dissipation, or indulges himself in tyranny or meanness, till at last an experience supervenes which tastes too strong, even for him, the agent. He didn't intend quite *that*! It casts a 'lurid light' on all the rest of the performances, so he cries 'halt' and 'turns over a new leaf.' Now I take it that the doctrine of an innate conscience in morals, as opposed to the pure associationist doctrine of nursery-teaching *plus* prudential calculation, means no more than this, that bad deeds will end by *tasting* bad, even to the agent who does them successfully, if you let him experience them concretely enough, with all the circumstances that they comport. They will, in short, beget an intrinsic disgust; the need of stealthiness in our tread, the satiety which our orgies leave, the looks and cries of our victims lingering obstinately behind, spoil the fun for us and end by undermining it altogether. For the poor deaf and dumb boy the fun of thieving stopped as soon as the ill-gotten gold-piece saddled him with so important a responsibility that even his moon-mother in the sky grew mixed up with the affair.

Few documents, it seems to me, cast more light on our unsophisticated intellectual and moral instincts than the sincere and unpretending narrative which Mr. d'Estrella has allowed me to print.

WILLIAM JAMES.

HARVARD UNIVERSITY.